ASSIGNMENT 3

Textbook Assignment: "Plumbing," chapter 3, pages 3-1 to 3-35.

3-1. Plumbing kit assemblies are listed in the Naval Construction Force Table of Allowance (TOA).

1. True
2. False

3-2. Procedures for issue and accounting of tools in an NMCB are contained in what publication?

1. NAVFAC MO-231
2. OPNAV 1600.3
3. NAVSUP 3400.6
4. COMTHRIDNCB/ COMSECONDNCB 4400.3

3-3. What is the rule of thumb for grading a sewer line?

1. 1/4 inch per foot
2. 1/2 inch per foot
3. 1/4 inch per yard
4. 1/2 inch per yard

3-4. When a pipeline must cross under a road, the trench must be at least what depth?

1. 5 feet
2. 6 feet
3. 3 feet
4. 4 feet

3-5. What weight of pipe is adequate for most Navy base construction?

1. XV
2. XH
3. SV
4. SH

3-6. What tools for cutting CSIP should be used only if the most appropriate tools are not available?

1. Hammer and chisel
2. Abrasive cutter
3. Band saw
4. Hydraulic snap cutter

3-7. A 1/16th bend changes the direction of a pipeline a total of how many degrees?

1. 11 1/4
2. 22 1/2
3. 45
4. 90

3-8. What type of tee should you use to connect lines of different sizes?

1. Tapped
2. Sanitary
3. Test
4. Reducing

3-9. Which of the following types of 90-degree Y-branches can be used as an individual vent?

1. Reducing
2. Double
3. Straight
4. Box

3-10. Horizontal 4-inch building drain lines in a straight run should have cleanouts placed at what minimum intervals?

1. 35 feet
2. 45 feet
3. 50 feet
4. 60 feet

3-11. A long-hubbed fitting used for insertion into an existing line is called a/an

1. adaptor
2. tucker
3. sisson
4. tap tee

3-12. What special fitting should be inserted into a soil branch for use with a water closet?

1. A closet bend
2. An offset
3. An increaser
4. A sewer saddle

3-13. If the gas pressure of a propane furnace puts out the lighter flame, you should

1. look for leaks
2. light another piece of paper
3. close the fuel valve
4. detach the portable propane tank

3-14. What action should you take if you suspect the lead for melting contains moisture?

1. Add lead to the melting pot
2. Let the moisture turn into steam
3. Let the lead splash until the moisture is gone
4. Dry the lead

3-15. Before starting to pour a joint with melted lead, you notice slag on top of the molten metal. What action should you take?

1. Disregard the slag and pour the joint
2. Remove the slag from the lead
3. Let the molten metal cool
4. Heat the molten metal to evaporate the slag

3-16. What tool should you use to tamp oakum into the hub of a bell-and-spigot pipe when you are making a joint?

1. A small ball peen hammer
2. A dull, cold chisel
3. A caulking iron
4. A yarning iron

3-17. When dipping up lead to pour a joint, you should take what precaution?

1. Dip enough lead to make the joint in one pour
2. Fill the tub within one half of an inch of the rim
3. Fill the ladle no more than three-fourths full
4. Preheat the hub to prevent splattering the lead

3-18. Being sure no moisture gets into the molten lead is one safety consideration. What other safety precaution should you take when working with molten lead?

1. Wear fire-retardant clothing and shoes
2. Wear a face shield and gloves
3. Maintain a large burner flame
4. Melt the burner rapidly to burn off the slag

3-19. You are using a caulking iron around a joint after the lead has hardened. You should tamp it firmly but gently with a hammer because striking the iron too hard can cause what problem?

1. A broken caulking iron
2. A cracked cast-iron hub
3. A broken clamp around the joint runner
4. A cracked lead seal

3-20. When pouring an upside down joint, you need what device that is not used in pouring vertical joints?

1. Joint runner
2. Caulking iron
3. Plumber's ladle
4. Yarning iron

3-21. When laying a cast-iron sewer line through a marshy area, you should seal the joints with

1. grout
2. molten lead
3. lead wool
4. bituminous compound

3-22. A lead-wool joint in a cast-iron pipe should be packed with oakum to within what distance of the top of the hub?

1. 1 inch
2. 3/4 inch
3. l/2 inch
4. l/4 inch

3-23. In what type of joint should you use a gasket?

1. Vertical caulked
2. Upside down
3. Lead wool
4. Compression

3-24. In what type of joint should you tighten stainless steel clamps to about 60 inch-pounds of torque?

1. No hub
2. Compression
3. Lead wool
4. Horizontal caulked

3-25. Vitrified clay pipe does NOT come in which of the following laying lengths?

1. 36 inches
2. 30 inches
3. 24 inches
4. 18 inches

3-26. When making a cement joint between two lengths of vitrified clay pipe, you should use grout made of what materials?

1. Bituminous compounds and water
2. Portland cement and water
3. Cement, sand, and water
4. Cement, water, and pieces of oakum

3-27. While making a grout joint, you caulk about 3/4 inch of oakum into the bell, fill the joint with grout, and then pack the grout into the joint. Before finishing the joint, you should recaulk it after waiting what length of time?

1. 45 minutes
2. 30 minutes
3. 10 minutes
4. 5 minutes

3-28. What is another name for plastisol joint connection?

1. Speed seal joint
2. Gasket joint
3. No-grout joint
4. Rootproof joint

3-29. Scratches and gouges affect plastic pipe in which of the following ways?

1. It becomes toxic
2. It rusts easier
3. It reduces pressure-carrying capacity
4. It causes electrolytic corrosion

3-30. To prevent plastic pipe from flattening during prolonged storage, you should not stack it more than how many feet high?

1. 1
2. 2
3. 3
4. 4

3-31. What are the four methods of joining plastic pipe?

1. Threading, solvent welding, fusion welding, and flare
2. Solvent welding, fusion welding, flare, and fillet welding
3. Fusion welding, fillet welding, threading, and solvent welding
4. Fillet welding, threading, solvent welding, and flare

3-32. To ensure plastic pipe and fittings are thermally balanced, you should keep them at the same temperature for what length of time before welding?

1. 60 minutes
2. 15 minutes
3. 30 minutes
4. 120 minutes

3-33. After having applied the second coat of cement to your solvent-welded PVC joint, you should insert the pipe to full-socket depth and rotate it how many turns?

1. One
2. Three-fourths
3. One half
4. One fourth

3-34. When you solvent weld PVC pipe, the surrounding air should NOT be above what temperature?

1. 75°F
2. 80°F
3. 85°F
4. 90°F

3-35. During what plastic pipe joining procedure(s) is it especially important not to rotate the pipe when it is joined with the fitting?

1. Fusion welding only
2. Fillet welding only
3. Fusion and fillet welding
4. Solvent and fillet welding

3-36. What type of plastic pipe should be used only as a temporary piping system?

1. Threaded
2. Fusion welded
3. Solvent welded
4. Fillet welded

3-37. The initial testing of a plastic pipeline should NOT exceed which of the following pressures?

1. 1 l/2 times the working pressure
2. 50 psig
3. 60 psig
4. l/2 of the full-working pressure

3-38. The high-pressure test of a PVC pipeline should be maintained for what minimum length of time?

1. 8 hours
2. 10 hours
3. 12 hours
4. 15 hours

3-39. Plastic pipe should be backfilled with material free of rocks or debris to a depth of at least how many inches above the pipe?

1. 1 to 2
2. 2 to 3
3. 6 to 8
4. 9 to 11

3-40. When sewer pipe is laid in a trench, the pipe should be placed on what type of bed?

1. Compacted sand or gravel
2. Loose fill
3. 3-inch concrete slab
4. 4-inch-diameter rock or larger

3-41. You are starting to lay sewer pipe in a trench that slopes downward from point X to point Y. At what point should you lay the first pipe, and what end of the pipe should you point upstream?

1. X, hub end
2. X, spigot end
3. Y, hub end
4. Y, spigot end

3-42. The invert of a pipe is defined as the

1. lowest point on the outside of the pipe
2. lowest point on the inside of the pipe
3. highest point on the outside of the pipe
4. highest point on the inside of the pipe

3-43. What is the most popular test for checking leakage of sewer pipe after the roughing-in is completed?

1. Air
2. Steam
3. Odor
4. Water

3-44. What action should you take when a pipeline you are testing for leaks, by the air method, does not hold a pressure of 5 psi for 15 minutes?

1. Fill the pipe with water and look for leaks
2. Apply a soapy water solution to the joints and look for bubbles
3. Apply more sealing material to each joint
4. Remove oakum and lead from each joint and repack them

3-45. Changes in sizes of sewer lines should be made only at what part of the sewer system?

1. Siphons
2. Grease traps
3. Manholes
4. Sewage regulators

3-46. When the invert of the inlet pipe is more'than 2 feet above that of the sewer outlet pipe, drop manholes are used for what purpose?

1. To trap grit
2. To reduce pressure
3. To reduce turbulence
4. To find the level of groundwater

3-47. When backfilling sewer systems, you fill to 2 feet above the pipe by hand with clean material. When, if ever, should you tamp the backfill material?

1. Every 4 inches
2. Every 6 inches
3. After the full 24-inch covering
4. Never

3-48. What type of aboveground pipe has a zinc coating to protect it against acid waste?

1. Steel
2. Copper
3. Galvanized wrought iron
4. Brass

3-49. What type of pipe consists of an alloy of zinc and copper?

1. Steel
2. Brass
3. Copper
4. Galvanized wrought iron

3-50. What is the most important function of a trap?

1. To prevent sewer gases from entering a building
2. To collect sediment before it enters the waste system
3. To serve as a connection between waste fixtures and waste systems
4. To help reduce the time for roughing-in

3-51. What does the term "trap seal" mean in plumbing?

1. An outlet that expels sewer gas to the atmosphere
2. A rubber seal that secures the trap in the system
3. The water held in the bent portion of a fixture
4. The sewer gas trapped from a building P-trap

3-52. What is the purpose of vent piping in a plumbing system?

1. To provide an outlet for sewer fumes
2. To maintain the seals of fixture traps
3. To permit the installation of sight drains
4. To ensure the grease traps works properly

3-53. What portion of the venting system extends above the highest fixture branch?

1. The back vent
2. The common vent
3. The main soil and waste stack
4. The main soil and waste vent

3-54. When installing two or more fixtures with individual vents, you should determine the size of the leg piping that connects to the main vent in what manner?

1. The leg pipe should be large enough to carry the total fixture load
2. The leg pipe should be the same size as the back vent piping
3. The leg pipe should be sized with the main stack
4. The leg pipe should be the same size as the main vent

3-55. What type of vent is used to vent two traps to a single pipe?

1. Wet
2. Circuit
3. Common
4. Back

3-56. What maximum number of fixtures is permitted on a circuit vent system?

1. Six
2. Two
3. Eight
4. Four

3-57. A wet vent that drains five fixture units must have a diameter that is what size, in inches?

1. 3.5
2. 2.0
3. 2.5
4. 3.0

3-58. The part of the main soil and waste vent extending above the roof should be at least what length?

1. 6 inches
2. 8 inches
3. 10 inches
4. 12 inches

3-59. When waterproofing the opening in a roof through which the soil and waste vent passes, you should perform what step last?

1. Solder the roof flashing to the vent
2. Install roof flashing over the top of the roofing material
3. Place a layer of roofing material over the top of the roof flashing
4. Apply roofing cement to the joint

3-60. What should be the size of the stack vent compared to that of the waste stack when a building is vented effectively?

1. Smaller than the waste stack
2. Half the size of the waste stack
3. Three fourths the size of the waste vent
4. At least as large as the waste stack

3-61. The type of trench used for a sewer line differs from that used for a waterline in that the sewer line must be

1. sloped
2. dug 2 feet wide
3. backfilled after a pipe-leakage test
4. backfilled with soil free of rocks and debris

3-62. When laying an underground waterline, you should ensure that it does NOT come closer than how many feet of nearby sewers?

1. 10
2. 12
3. 14
4. 16

3-63. When you are laying an underground waterline, what is the worst hazard in a distribution system?

1. Back siphonage
2. Faulty plumbing
3. A cross-connection
4. A leak

3-64. To permit air to escape and enter a water main, you should install what components?

1. Vacuum and air release valves
2. Service lines with vacuum valves
3. Vents tied to sewer stacks
4. Service lines and wet vents

3-65. Cast-iron pipe for water supply systems comes in standard lengths of how many feet?

1. 5
2. 10
3. 15
4. 20

3-66. What are the three major types of fittings used with cast-iron water pipes?

1. Tees, elbows, and couplings
2. Tees, bends, and elbows
3. Elbows, traps, and bends
4. Bends, tees, and traps

3-67. The joining of bell-and-spigot cast-iron pipe in water service does not depend on caulking for a tight fit when the pipe is joined with

1. poured lead
2. sulfur compound
3. lead wool
4. yam and lead

3-68. After annealing a piece of copper by heating it until it is dull red, you should cool the copper by using what procedure?

1. By quenching it in an oil bath
2. By cooling it slowly
3. By work-hardening it
4. By dipping it in water

3-69. To bend a piece of copper tubing 90 degrees, what method is best for you to use?

1. Wrap the tubing with string and bend it by hand
2. Fill the tubing with sand and bend it by hand
3. Bend the tubing with a tube bender
4. Wrap the tubing with soft wire and bend it by hand

3-70. A measurement was taken from the end of a pipe to the center of a fitting. What type of measurement was used?

1. Center to back
2. End to center
3. End to end
4. Center to center

3-71. Which of the following methods are used to join two pieces of copper tubing?

1. By soldered or flared fittings
2. By flared or threaded fittings
3. By solder or lead
4. By flared fittings and lead

3-72. You have hacksawed a piece of copper tubing for flaring. Before making the flare on one end, you should perform which of the following actions?

1. Ream the end
2. Clean the end until new metal shows
3. Slip a flare nut on the copper tubing
4. Anneal the end of the copper tubing

3-73. The tighter the fit between the copper tubing and fitting, the farther the solder or filler metal is drawn into the joint. What rule is applied?

1. Heat conduction
2. Capillary attraction
3. Flux attraction
4. Copper conduction

3-74. What are the two methods of brazing with a silver-based filler metal?

1. Filler and caulking
2. Insert and filler
3. Feed-in and insert
4. Caulking and insert

3-75. In silver brazing a joint on copper tubing by the insert method, you see the flux flow freely. You should apply heat to the fitting hub farthest from the junction of the tube and fitting until which of the following conditions occurs?

1. The fitting glows cherry red
2. The flux is drawn from the joint
3. The tubing turns dark red
4. The filler metal appears at the fitting junction